

WHAT IS CLAIMED IS:

1. A storage to be connected to a network, comprising:
a plurality of interfaces which is connected to the network
and receives file access;

a plurality of disk drives; and

a control unit which translates the file access into block
access and controls the plurality of disk drives on the basis
of the block access,

wherein the control unit logically partitions the
plurality of interfaces, the plurality of disk drives and the
control unit and causes the partitioned plurality of interfaces,
the partitioned plurality of disk drives and the partitioned
control unit to operate as a plurality of virtual storages
independently.

2. A storage according to claim 1, wherein the control
unit further includes a plurality of cache memories, and the
plurality of cache memories is logically partitioned and
allocated to the respective plurality of virtual storages.

3. A storage according to claim 2, wherein the control
unit further includes a first processor, which translates the
file access into the block access, and a second processor, which
controls the plurality of disk drives on the basis of the block

access, and

wherein the first processor and the second processor are logically partitioned, respectively, and allocated to the respective plurality of virtual storages.

4. A storage according to claim 3, wherein the first processor executes first hypervisor which performs logical partitioning of the plurality of interfaces and the first processor, and

wherein the second processor executes second hypervisor which performs logical partitioning of the plurality of cache memories, the plurality of disk devices and the second processor.

5. A storage according to claim 4, wherein the control unit further includes a plurality of memories which is used by the first processor and a plurality of communication units which connects the first processor and the second processor,

wherein the plurality of memories is logically partitioned by the first hypervisor and the plurality of communication units is logically partitioned by the second hypervisor.

6. A storage according to claim 3, wherein the first processor and the second processor execute hypervisor which performs logical partitioning of the plurality of interfaces,

the first processor, the plurality of cache memories, the second processor, and the plurality of disk drives.

7. A storage according to claim 1, wherein the control unit executes hypervisor which performs logical partitioning of the plurality of interfaces, the control unit, and the plurality of disk drives.

8. A storage according to claim 3 further connected to a supervising terminal,

wherein the control unit performs the logical partitioning on the basis of information inputted from the supervising terminal.

9. A storage according to claim 8, wherein, if information to be inputted to the supervising terminal is information to the effect that a host system using the storage attaches importance to a data transfer rate, an amount of allocation of the plurality of cache memories to a virtual storage to be used by the host system among the plural virtual storages is increased.

10. A storage according to claim 8, wherein, if information to be inputted to the supervising terminal is information to the effect that a host system using the storage

performs random access in a large area, an amount of allocation of the plurality of cache memories to a virtual storage to be used by the host system among the plural virtual storages is reduced.

11. A storage according to claim 5 further connected to a supervising terminal,

wherein the control unit performs the logical partitioning on the basis of information inputted from the supervising terminal.

12. A storage according to claim 11, wherein, if information to be inputted to the supervising terminal is information to the effect that a host system using the storage performs sequential continuous access, an amount of allocation of the plurality of cache memories and the plurality of memories which is used by the first processor to a virtual storage to be used by the host system among the plural virtual storages is increased.

13. A storage according to claim 8, wherein, if information to be inputted to the supervising terminal is information to the effect that a host system using the storage accesses a small number of large files, an amount of allocation of the first processor to a virtual storage to be used by the

host system among the plural virtual storages is reduced, and an amount of allocation of the second processor to the virtual storage is increased.

14. A storage according to claim 8, wherein, if information to be inputted to the supervising terminal is information to the effect that a host system using the storage accesses a large number of small files, an amount of allocation of the first processor to the a virtual storage to be used by the host system among the plural virtual storages is increased, and an amount of allocation of the second processor to the virtual storage is reduced.

15. A storage according to claim 11, wherein information to be inputted to the supervising terminal is information to the effect that a host system using the storage sequentially accesses a large file, an amount of logical allocation of the plurality of communication units to a virtual storage to be used by the host system among the plural virtual storages is reduced.

16. A storage system comprising:

a storage comprising a plurality of interfaces which is connected to the network and receives file access, a plurality of disk drives, and a control unit which translates the file

access into block access and controls the plurality of disk drives on the basis of the block access; and

a supervising terminal which is connected to the storage,

wherein the storage logically partitions the plurality of interfaces, the plurality of disk drives, and the control unit on the basis of information to be inputted to the supervising terminal and operates as plural virtual storages independently.

17. A storage system according to claim 16, wherein information to be inputted to the supervising terminal is information on characteristics of accesses of a computer using the storage, and the storage calculates an amount of logical partitioning of resources provided in the storage on the basis of the information on characteristics of accesses to be inputted to the supervising terminal and performs the logical partitioning using a result of the calculation.

18. A storage to be connected to a network, comprising:

a plurality of interfaces which is connected to the network and receives file access;

a plurality of disk drives; and

a control unit which translates the file access into block access and controls the plurality of disk drives on the basis of the block access,

wherein the control unit further includes a plurality

of cache memories, a first processor, which translates the file access into the block access, a second processor, which controls the plurality of disk drives on the basis of the block access, a plurality of memories which is used by the first processor and a plurality of communication units which connects the first processor and the second processor,

wherein the control unit logically partitions the plurality of cache memories, the first processor, the second processor, the plurality of interfaces, the plurality of disk drives, the plurality of memories, the plurality of communication units and the control unit and causes the partitioned devices to operate as a plurality of virtual storages independently.